Eugene Public Works
Engineering

Date: April 22, 2013

To: Eugene Planning Commission

From: Peggy Keppler, Engineering Development Review Manager

Subject: **Comments regarding the Planning Commission Work Session Discussion on Stormwater Development Standards EC 9.6790-9.6796**

STORMWATER MANAGEMENT REQUIREMENTS IN OTHER JURISDICTIONS

The City of Eugene is one of seven Phase 1 NPDES permittees in Oregon, with the other six being: City of Portland, Clackamas County, Multnomah County, Clean Water Services, City of Gresham and City of Salem. Several permittees represent multiple agencies (e.g. Clean Water Services represents Washington County and 11 cities including Beaverton, Hillsboro, and Tigard). Each of the seven permittees is required to revise their stormwater management program as necessary to implement volume reduction requirements and prioritize and include implementation of Low-Impact Development (LID), Green Infrastructure (GI) or equivalent planning, design and construction approaches as part of the agencies' stormwater management programs (see attached excerpt of the post-construction permit requirements in Attachment A). Below is a short summary of the other Phase 1 NPDES permittees current requirements for development:

- Portland has a 4 level stormwater management hierarchy. First level requires applicant to infiltrate onsite to the maximum extent; with vegetated infiltration facility and by an overflow to subsurface infiltration facility (UIC) if needed. Level 2 allows sites that can't infiltrate the 10-year storm event to identify an off-site discharge point. Level 3 would be to construct an overflow to surface water body. And, level 4 would be to construct an overflow to the combined sewer system.

- Clackamas County always requires 100% on-site retention of stormwater runoff, with the exception of direct discharge to the Clackamas River.

- Multnomah County requires new development to retain post-development increased runoff flows up to 10-year 24 hour storms.

- Clean Water Services requires green infrastructure for all public projects and residential developments, with some exceptions, and encourages green infrastructure for commercial and industrial development.

- Gresham encourages and promotes green infrastructure but doesn't require it in their current code.

- Salem is currently developing new low impact development stormwater requirements and new design standards that prioritize infiltration and detention of stormwater runoff.

STORMWATER SYSTEM DEVELOPMENT CHARGES (SDCs)

Systems Development Charges (SDCs) are impact fees that are generally collected when expansion, new development, or an intensification of use occurs on property served by City infrastructure. The fees are used to fund the non-assessable portion of infrastructure construction costs (wastewater, stormwater, transportation, and park facilities) needed to support growth in the community and to recoup a portion of the community's investment in the infrastructure already in place.

Development not implementing on-site LID will be required to provide for off-site LID functions (infiltration and/or natural filtration of stormwater) by paying, through Systems Development Charges (SDCs), for a share of LID capacity in City capital projects. In this way, development implementing on-site LID stormwater facilities will pay a lower SDC than development not implementing such facilities.

While paying a lower SDC for implementing on-site LID stormwater facilities can be characterized as a discount, the lower SDC is based on such development creating less demand for capacity in certain capital projects within the public stormwater system. Development not implementing on-site LID stormwater facilities, i.e. meeting Priority 3 requirements for mechanical treatment, creates a higher demand for capital improvements providing LID functions and therefor will pay a higher stormwater SDC. Modifications to stormwater SDC methodology and rates are not part of the proposed changes in stormwater development standard land use regulations and will be adopted separately through a public hearing and resolution of the City Council.

Existing provisions for credits (discounts) to the stormwater user fees are currently, and will continue to be available to sites that implement on-site retention of stormwater runoff and that go beyond minimum requirements for stormwater quality treatment, e.g. retrofitting existing stormwater facilities in alignment with infiltration/filtration. No changes in stormwater user fees are proposed in relation to the proposed changes in stormwater development standards.

STORMWATER QUALITY FACILITY SIZING

Applicants typically install one of two types of infiltration/filtration treatment facilities: Stormwater Planters or Rain Gardens. The treatment facilities are quite similar (see drawings in Attachment B); the difference being whether the sides have a structural barrier preventing the stormwater runoff from moving laterally to soils surrounding the treatment facility. Unlike the current SIM-Form that has different sizing factors based for infiltration and filtration, the proposed code changes will establish the minimum square footage requirement for green infrastructure based on soils that can infiltrate 2" per hour. This is the same criteria that are used in the filtration sizing factor in the current SIM-Form. This means, the proposed code will not require any stormwater planter or rain garden stormwater quality treatment facility to be sized larger than what is currently required for a filtration facility using the current SIM-Form.

The stormwater planter and rain garden facility sizing requirements for a sampling for square footages of impervious surfaces recently reviewed by staff is provided in the charts below the drawings in Attachment B. Please note that if a development site has soils that can infiltrate 2" or more per hour, the facility will not require the under-drain system that is shown on the drawings.

ATTACHMENT A: NPDES Permit Excerpt (December 29, 2010)

Post-Construction Site Runoff: The permittee must continue to implement their post-construction stormwater pollutant and runoff control program.

i. By January 1, 2014, the post-construction stormwater pollutant and runoff control program applicable to new development and redevelopment projects that create or replace 1000 ft^2 of impervious surface must meet the following conditions:

   1) Incorporate site-specific management practices to mimic natural surface or predevelopment hydrologic functions as much as practicable. The site specific management practices should optimize on-site retention based on the site conditions;
   2) Reduce site specific post-development stormwater runoff volume, duration and rates of discharges to the municipal separate storm sewer system (MS4) to minimize hydrological and water quality impacts from impervious surfaces;
   3) Prioritize and include implementation of Low-Impact Development (LID), Green Infrastructure (GI) or equivalent planning, design and construction approaches; and,
   4) Capture and treat 80% of the annual average runoff volume, based on a documented local or regional rainfall frequency and intensity.

ii. The permittee must identify, and where practicable, minimize or eliminate ordinance, code and development standard barriers within their legal authority that inhibit design and implementation techniques intended to minimize impervious surfaces and reduce stormwater runoff (e.g., Low Impact Development, Green Infrastructure). Such modifications to code and development standards are only required to the extent they are permitted under federal and state laws. The permittee must review ordinance, code and development standards for modification, minimization or elimination, and appropriately modify ordinance, code and development standard barriers by January 1, 2014. If an ordinance, code or development standard barrier is identified at any time subsequent to January 1, 2014, the applicable ordinance, code or development standard must be modified within three years.

iii. To reduce pollutants and mitigate the volume, duration, time of concentration and rate of stormwater runoff, the permittee must develop or reference an enforceable post-construction stormwater quality management manual or equivalent document by January 1, 2014 that, at a minimum, includes the following:

   1) Establish a threshold that is at least as small as set out in f. i. above;
   2) A defined design storm or an acceptable continuous simulation method to address the capture and treatment of 80% of the annual average runoff volume;
   3) Applicable LID, GI or similar stormwater runoff reduction approaches, including the practical use of these approaches;
   4) Conditions where the implementation of LID, GI or equivalent approaches may be impracticable; and,
   5) BMPs, including a description of the following:
      a) Site-specific design requirements;
      b) Design requirements that do not inhibit maintenance; and,
      c) Conditions where the BMP applies; and,
   6) Pollutant removal efficiency performance goals that maximize the reduction in discharge of pollutants.

iv. The permittee must review, approve and verify proper implementation of post-construction site plans for new development and redevelopment projects applicable to this section.

v. Where a new development or redevelopment project site is characterized by factors limiting use of on-site stormwater management methods to achieve the post-construction site runoff performance standards, such as high water table, shallow bedrock, poorly-drained or low permeable soils, contaminated soils, steep slopes or other constraints, the Post-Construction Stormwater Management program must require equivalent pollutant reduction measures, such as off-site stormwater quality management. Off-site stormwater quality management may include off-site mitigation, such as using low impact development principles in the construction of a structural stormwater facility within the sub-watershed, a stormwater quality structural facility mitigation bank or a payment-in-lieu program.

vi. A description of the inspection and enforcement response procedures the permittee will follow when addressing project compliance issues with the enforceable post-construction stormwater management performance standards.